

Memo

To: Riley Allen and Costing Subgroup
From: John R. Spencer
CC: Ed McNamara, Settlement Subgroup
Date: August 24, 2009
Re: SPEED - Cost Estimates for Settlement

The settlement subgroup has reached general consensus on the methods for settlement of the various costs and benefits of the new "Standard Offer" projects. On a per project basis the producer costs for settlement have the following components:

1. The producer share of the SPEED Facilitator administrative budget.
2. The cost of the metering equipment.
3. The producer share of the cost of interrogating the electric meters.

I have estimated the SPEED Facilitator administrative budget to be approximately \$329,800¹²³ for the first year that most of the projects are operational. Additionally the SPEED Facilitator and staff will be active for the two years before most projects become operational. The SPEED Facilitator budgets are estimated as follows:

	Year 1	Year 2	Year 3 (projects operational)
	(\$)	(\$)	(\$)
Payroll costs	107,100	152,600	165,700
Insurance	11,500	16,700	17,800
Office Expense	9,200	16,300	17,000
Legal/Acct./Misc. Expenses	15,100	22,600	21,300
Meter Interrogation			99,000
Consultants	10,000	-	
Programming	30,000		
Total	182,900	208,200	320,800

¹ The administrative budgets presented herein are estimates and are subject to review and approval by the VEPPI Board and by the Vermont Public Service Board.

² There will be a reduction in the Rule 4.100 administrative costs, as some of VEPPI's employee costs and fixed costs will shift to the SPEED program.

³ All costs are in 2010 dollars

Assuming that the Year 1 and Year 2 budgets are capitalized and amortized in the first 5 years after the projects become operational, the budget for Year 3 (the first operational year), including capitalized costs is estimated as follows:

	Year 3 (projects operational) (\$)
Payroll costs	165,700
Insurance	17,800
Office Expense	17,000
Legal/Acct./Misc. Expenses	21,300
Meter Interrogation	99,000
Consultants	-
Programming	-
Capitilized Costs	78,200
Total	399,000

Assuming a 50%-50% split of administrative costs between the producers and the utilities, the producer's share of the SPEED Facilitator's annual budget is estimated at about \$199,500⁴

What is unknowable at this point is the number of projects to use as a denominator to estimate the cost per project. As a guess, I have based the cost per project on 140 projects as follows:

# of Projects	Size (KW)	Total Capacity (KW)
30	15 or less	450
85	16-1000	9,550
25	1001 - 2200	40,000
140		50,000

In the case of the new "Standard Offer" projects there is not a significant difference in the work to administrate the different size projects⁵. Dividing the producer's share of the SPEED Facilitators annual budget by 140 projects⁶ yields a cost per project of about \$1,425 per year (\$119/mo.).

⁴ The cost of meter interrogation is assumed part of the SPEED Facilitator's annual budget and is assumed split 50%-50% between producers and utilities. Meter interrogation costs are directly related to the number of projects.

⁵ The 15 KW and under projects will require a financial settlement of utility benefits and liabilities which will require some additional work.

⁶ Meter interrogation costs are directly related to the number of projects.

There is however precedent⁷ to "socializing" the administrative costs based on the size of the projects. When the projects become operational a socialization of the producer's administrative costs might result in the following fee schedule:

# of Projects	Size (KW)	Producer Administrative Fee/project (monthly fee)	Producer Administrative Fee/project (annual fee)	Total Administrative Fee (\$/yr.)
30	15 or less	50	600	18,000
85	15-1000	115	1,380	117,300
25	1000 - 2200	215	2,580	64,500
140				199,800

The settlement subgroup reached a consensus that metering for all project sizes should be an electronic, time-of-use meter with at least two channels of interval data storage and an internal modem⁸. The cost^{9,10} of the necessary metering is as follows:

Type of Service	Voltage	Cost of Meter (\$)	Transformers (\$)	Commissioning (\$)	Metering Cost (\$)
1 phase up to 72 KW	Service Voltage	380	-	300	680
3 phase up to 72KW	Service Entrance or 12.5KV	450		300	750
3 phase >72 KW	12.5 KV	500	5,400	300	6,200
3 phase >72 KW	34.5KV	500	21,000	300	21,800

The subgroup discussed the advantages and disadvantages of having the cost of the meter borne by the producer or borne by the interconnected utility. No consensus was reached on this issue.

⁷ The producer administrative fees for Rule 4.100 projects are somewhat socialized based on an arrangement agreed to by the producers in that program.

⁸ CVPS and GMP use "Elster" meters. Other utilities may require different meters, but with similar capabilities.

⁹ Interconnection at higher voltages will require additional cost in wiring, meter sockets, etc. that are not included in the metering estimates

¹⁰ It is expected that projects greater than 72 KW will interconnect to a 3 phase circuit and that most projects will connect at service voltage or 12.5 KV .

The cost of remote meter interrogation can be significant for the smaller projects. For this reason the subgroup reached consensus that projects under 15 KW should not be required to provide and pay for daily remote meter interrogation. For these projects the meter will be interrogated on-site monthly by the interconnected utility and the hourly data communicated to the SPEED facilitator who will perform an after-the-fact financial settlement of the utility load benefits and liabilities on a pro-rata basis. The cost for meter interrogation for these projects will not be borne by the producers.

In order to allow for remote meter interrogation the producer must arrange and pay for a phone line with a dedicated number. Commercial phone lines are estimated at between \$50 and \$85 dollars/ month depending on the telephone service provider. (The cost of remote meter interrogation is estimated at \$75/ month per producer site; this cost is carried in the SPEED Facilitator annual budget) The subgroup did discuss the fact that this technology is rapidly evolving, and with the roll-out of "smart metering" the costs for meter interrogation will be dramatically reduced.

End of Memo